

**WE CLAIM AS OUR INVENTION:**

1. A method for treating a protein deficiency comprising the steps of:  
automatically quantitatively analyzing a sample obtained from airways of a subject with respect to a content in said sample of at least one protein selected from the group of proteins consisting of SP-A, SP-B, SP-C and SP-D;  
from the quantitative analysis, automatically determining if a deficiency of at least one protein in said group of proteins exists;  
if any protein in said group of proteins is determined to be deficient in said sample, automatically determining a therapeutically effective dose of a replacement substance for any protein in said group of proteins that is deficient in said sample; and  
automatically preparing a medicament for administration to the subject containing said therapeutically effective dose of said replacement substance.
2. A medical device adapted for interaction with a subject to obtain a sample from airways of the subject, said medical device comprising:  
an analysis unit for automatically quantitatively analyzing said sample with regard to a content in the sample of at least one protein selected from the group of proteins consisting of SP-A, SP-B, SP-C and SP-D; and  
said analysis unit including a calculation unit that, from the quantitative analysis of the sample, automatically determines whether any protein in said group of proteins is deficient in said sample.
3. A medical device as claimed in claim 2 comprising:

a dosing unit connected to said analysis unit for automatically producing and dosing a medicament having a therapeutically effective dose of a replacement substance for remedying any deficiency of any protein in said group of proteins determined by said calculation unit.

4. A medical device as claimed in claim 3 wherein said dosing unit comprises at least one reservoir containing said replacement substance.

5. A medical device as claimed in claim 3 comprising a delivery arrangement connected to said dosing unit and adapted for interaction with the airways of the subject to deliver said medicament to the subject.

6. A medical device as claimed in claim 5 wherein said delivery arrangement comprises a dosing tube adapted for insertion into the trachea of the subject.

7. A medical device as claimed in claim 3 wherein said replacement substance comprises a substance selected from said group of proteins consisting of SP-A, SP-B, SP-C and SP-D.